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**IMPLEMENTATION RULES FOR COMPULSORY
CERTIFICATION OF ELECTRICAL AND
ELECTRONIC PRODUCTS**

Household and Similar Use Appliances

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IMPLEMENTATION RULES FOR COMPULSOEY CERTIFICATION OF ELECTRICAL AND ELECTRONIC PRODUCTS

Household and Similar Electrical Appliances

1. Scope

This document applies to household and similar electrical appliances.
It includes:

- Household refrigerator
- Food freezer
- Ice-makers
- Electric fan
- Heat pumps
- Air-conditioner
- Dehumidifiers
- Washing machines/Spin extractors
- Storage water heaters
- Room heaters
- Vacuum cleaners
- Appliances for skin and hair care
- Instantaneous water heaters
- Electric irons
- Electromagnetic ovens
- Roasters
- Grills
- Toasters
- Kitchen machines
- Microwave ovens
- Cooking ranges, hobs, ovens
- Range hoods
- Appliances for heating liquids
- Electric rice cookers
- Water dispensers
- Motor-compressors

2. Certification Module

Type test + Initial factory inspection + Follow-up inspection

3. Certification Process

3.1 Application for certification

3.2 Type test

3.3 Initial factory inspection

3.4 Evaluation of certification results and approval of certification

3.5 Follow-up inspection

4. General Requirements for Certification

4.1 Application for certification

4.1.1 Defining application unit for certification

4.1.1.1 In principle, application unit (see Appendix 1) shall be defined according to product families, models/types, specifications, working principles, constructions in terms of product safety, components having significant influence on EMC performance (see the components marked with * in Appendix 5).

Each model/type shall be clearly described if there are more than one model/type of products in the same application unit.

4.1.1.2 In principle, the application shall be made according to application unit.

Products, of the same model/type, of the same manufacturer, but from different factories, shall be in different application units. However, only one type test is required for the same product(s) from different factories, and the same product(s) from the other factories shall be checked and test report(s) shall be issued.

The same products from the same factory, but from different manufacturers, shall be in different application units. If necessary, sample delivery is required for consistency check and test report shall be issued.

4.1.2 Application documents

The formal application shall be submitted, if necessary, with the following documents:

- 1) Product assembly chart, circuit diagram, etc.;
- 2) List of critical components and/or materials (see Appendixes 4 and 5)
- 3) Description of the difference(s) between different models/types of products in the same application unit.

4) Other necessary documents.

4.2 Type test

4.2.1 Sample delivery for type test

4.2.1.1 The principles of sample delivery for type test

The representative samples from the application unit shall be selected and submitted for type test. If necessary, samples of the other products covered by this application unit shall be submitted for supplementary test.

For certification of appliance, critical safety components in appliance (see Appendix 4) shall be sent separately as required. Separate testing can be exempted for components with valid CCC certificates or voluntary certificates accepted for CCC certification for appliances in accordance with CNCA rules, but the components shall still meet the requirements of testing standards for appliances.

4.2.1.2 Sample quantity

The applicants shall deliver samples for type test in accordance with the requirements of the certification body and be responsible for them.

The requirements for quantity of appliance samples are listed in Appendix 3 and those for components tested in appliance are listed in Appendix 4.

4.2.1.3 Handling of type test samples and related documents

The samples and/or the related documents shall be handled appropriately after type test.

4.2.2 Type test standards, items and methods

4.2.2.1 Test standards

The test standards for certification are specified in Appendix 2 and the standards of valid editions shall be used for type test.

4.2.2.2 Test items

1) Safety test items

Safety test items shall include all appropriate items specified in safety standards.

2) EMC test items (if applicable)

EMC test items shall include all appropriate items specified in EMC standards.

4.2.2.3 Test methods

The type test shall be carried out according to the standards and/or methods specified and/or referred to in the standards.

4.2.3 Type test report

Testing body will issue type test report after type test.

Applicants are allowed to make corrections while non-conformities exist. The corrections shall be completed within the time limited by the certification body. The application will be regarded as abandoned if the corrections are not completed within the time limit. Applicants may also choose to terminate the application.

Type test report shall include product description report giving the information of all products in the application unit and information related to certification. Certification body shall organize the compilation of test report in accordance with the requirements for format and content. Type test report shall be accurate, clear and complete.

Certification body (testing body) shall provide certificate holders with type test reports in time. Certificate holders shall ensure factories to have complete and valid type test reports.

4.3 Initial factory inspection

4.3.1 Contents of the inspection

The contents of factory inspection shall include the factory quality assurance ability assessment and the product consistency check.

4.3.1.1 Factory quality assurance ability assessment

The inspector(s) assigned by the certification body shall carry out the factory quality assurance ability assessment in accordance with the *Factory Quality Assurance Ability Requirements* (see Appendix 6), the supplementary inspection requirements stipulated by CNCA and *Test Requirements in Factory Quality Control for Compulsory Certification of Household and Similar Use Appliances* (see Appendix 7)

4.3.1.2 Product consistency check

The consistency of the product applying for certification shall be checked on the site of production. If more than one application unit are involved in the certification, at least one type/model shall be sampled from each sub-category for the product consistency check. The consistency check shall focus on the following:

- 1) The name of product, type/model, specification and technical parameter on the nameplates and/or packing of products to be certified shall be identical with those indicated in the type test reports.
- 2) The constructions (mainly in terms of safety and EMC performance) of products to be certified shall be identical with those of the type test samples.
- 3) The critical safety components, important components and material, and components

having significant influences on EMC shall be identical with those declared for type test and confirmed by the certification body.

On-site witness test, if necessary, may be carried out to confirm safety and EMC performance of the products during the factory inspection.

4.3.1.3 Inspection scope

Factory quality assurance ability assessment and product consistency check shall cover all the products to be certified and the relevant factories.

4.3.2 Timing of factory inspection

Normally, the initial factory inspection shall be implemented after the type test is passed. The type test and factory inspection may be implemented at the same time under certain circumstances. During the initial factory inspection, products to be certified shall be on the production line.

The duration of factory inspection shall be determined by the amounts of application units of products to be certified and the scale of the factory. It will normally take 1 to 4 man-days for one factory of each manufacturer.

In principle, the initial factory inspection shall be completed within one year after the type test is passed. Otherwise, the type test shall be carried out again.

4.3.3 Factory inspection results

Inspection team shall report the factory inspection results to the certification body. If the factory inspection fails, the inspection team shall report it to the certification body directly. If there is any non-conformity found in the factory inspection, the corrective actions shall be taken within the time limit. Certification body (inspection team) shall verify the validity of the corrective actions in appropriate ways. If the corrective actions are not completed within the time limit, the factory inspection fails.

4.4 Evaluation of certification results and approval of certification

4.4.1 Evaluation of certification results and approval of certification

The certification body shall be responsible for comprehensive evaluation of the results of type test and factory inspection, and for issuing the certificates to the applicants after evaluation is passed. One certificate shall be issued for one application unit. The use of the certificates shall comply with the requirements of *Administrative Regulations for Compulsory Product Certification*.

4.4.2 Time frame

Time frame for certification means the working days starting from the acceptance of application to the issuance of certificates, which includes the time for type test, factory inspection, report submission after factory inspection, evaluation of certification results and

approval of certification, and certificate making.

Normally, type test takes 30 working days, not including the time for corrective actions and re-test due to non-conformities. If the safety components are required to be tested and the time needed exceeds that of the appliances, the type test duration shall be calculated according to the longest test time of the component. The type test duration starts from the receipt of the samples and test fees.

Factory inspection reports shall be submitted within 5 working days after the inspection. It will be counted from the day when the inspectors complete the inspection and receive from the factory the corrective action reports on non-conformities satisfying the requirements.

Certification result evaluation, certification approval and certificate making shall normally be completed within 5 working days (starting from the receipt of the certification fee).

4.4.3 Termination

Certification process shall be terminated by the certification body if the type test or factory inspection fails.

4.5 Surveillance

4.5.1 Contents of Surveillance

Surveillance includes follow-up inspection, effective investigation on certified products conducted by the relevant certification body.

4.5.2 Follow-up inspection

Normal follow-up inspection shall be scheduled by the certification body and factories. Factories shall ensure that certified products are being produced on the production line. Products, of the same factory, but different manufacturers, shall be covered in the inspection.

Follow-up inspection by the certification body may be carried out without any notice in advance.

Certificate holders shall accept follow-up inspections within the time limit. Otherwise, inspections will be regarded as rejected.

4.5.2.1 Frequency of follow-up inspection

Follow-up inspection shall normally be implemented within every 12 months after the initial factory inspection.

The frequency of inspection shall be increased under any following circumstances:

- 1) The certified product has serious quality problem, or is complained by clients, and the problem has been verified to be the responsibility of the certificate holders/manufacturers/factories.

2) The certification body has sufficient reasons to question the conformity of the certified product with the requirements of safety and EMC standards.

3) Sufficient information indicates that the conformity or the consistency of certified products might be affected due to the changes in organization structure, production condition and quality system of the manufacturer and/or factories.

4.5.2.2 Contents of the follow-up inspection

Contents of consistency check of the certified product in follow-up inspection are the same as those in initial factory inspection. The use of CCC mark and certificate shall be checked as well.

Follow-up inspection includes: factory quality assurance ability re-assessment + consistency check of products certified, and if necessary, samples may be taken and tested at the testing bodies.

The certification body shall implement the follow-up inspection in accordance with *Factory Quality Assurance Ability Requirements* (see Appendix 6). The items 3, 4, 5 and 9 specified in *Factory Quality Assurance Ability Requirements* must be covered by each follow-up inspection and the other items may be selected. All the items of the *Requirements* shall be covered within every four years.

The duration for follow-up inspection shall be determined by the amounts of units of certified products and with appropriate consideration of the production scale of the factory. It will normally take 1 to 2 man-days.

4.5.2.3 Sampling during follow-up inspection

If necessary, the certified products shall be sampled and tested. The samples shall be taken randomly from the conforming products of the factory (in order to ensure the consistency and authenticity of the certified products, samples may be taken from market/ distribution network, end of the production line, stock, etc. as appropriate). The designated testing bodies shall be responsible for the test. The methods and requirements for sampling shall be in accordance with the relevant specifications of the certification body.

All the test items specified in the standards for certification can be applied to the test.

The certification body may decide test items (part or all of the test items) for different products under different circumstances, based on the influence of the test items on the safety and/or EMC performance of the products.

4.5.2.4 Follow-up inspection results

Inspection team shall report the factory inspection results to the certification body. If the factory inspection fails, the inspection team shall report it to the certification body directly. If there is any non-conformity found in the factory inspection, the corrective actions shall be taken within 40 working days. Certification body (inspection team) shall verify the validity of the corrective actions in appropriate ways. If the corrective actions are not completed

within the time limit, the factory inspection fails.

4.5.2.5 Evaluation of follow-up inspection results

The certificates can be retained and the certification marks can continue to be used upon favorable inspection results. Upon unfavorable inspection results, clause 5.3 shall be followed.

4.5.3 Investigation by certification body

The certification body shall carry out effective investigation on certified products in accordance with *Regulations of the People's Republic of China on Certification and Accreditation* and decide the status of the certificates based on the investigation results.

4.5.4 Evaluation of surveillance results

The certificates can be retained and the certification marks can continue to be used upon favorable inspection results. Upon unfavorable inspection results, clause 5.3 shall be followed.

5. Certificate

5.1 Certificate maintenance

5.1.1 Certificate validity

The certificate of the products covered by this document doesn't specify expiry date. The validity of the certificate depends on the follow-up inspection. The certification body shall withdraw the certificate if follow-up inspection is rejected.

5.1.2 Change of the certified product

5.1.2.1 Application for change

Shall any change occur in the specification, type/model, technical parameter of the components listed in Appendix 4 and Appendix 5 of the certified products, or the design, electric construction concerning safety or EMC of the appliances, or the certificate information, test standards, the application for change shall be made to the certification body.

5.1.2.2 Evaluation and approval of change

The certification body shall evaluate the change(s) based on submitted information and confirm whether it can be approved or samples shall be submitted for tests. If test is necessary, the change will be approved upon favorable test result.

In principle, evaluation of change(s) shall be based on the product subject to original type test.

5.2 Extension of certified products

5.2.1 Procedure for extension

For extension within the certified product unit, the certificate holder shall make an application.

The certification body shall check the consistency of the extended products with the certified products and confirm the applicability of the original certification results to the extended products. If necessary, supplementary tests or inspections may be carried out against the differences.

After compliance is confirmed, either a separate certificate can be issued or the original certificate can be updated as requested by the certificate holder.

In principle, evaluation for extension shall be based on the product subject to original type test of full test.

5.2.2 Requirements for sample

The certificate holder shall first submit the technical documents related to the extended products. When samples are required, Clause 4.2 of this document shall be followed for sample delivery and verification. If necessary, test shall be carried out. Test items shall be determined by the certification body and the results shall be submitted to the certification body for evaluation.

5.3 Suspension, cancellation and withdrawal of certificates

The suspension, cancellation and withdrawal of certificates shall follow *Administrative Measures for Compulsory Product Certification* and the requirements of the certification body.

If certificate holders can not accept follow-up inspection/or sampling, the certification body shall suspend the relevant certificates.

If certificate holders reject follow-up inspection/or sampling, the certification body shall withdraw the relevant certificates.

Certificate holders may apply to the certification body for suspension or cancellation of certificates. The certification body shall suspend or cancel the certificates according to the application.

For application for certificate suspension due to acceptable reasons such as production stopping, the certificate shall not be suspended for more than 12 months. If the certificate is not resumed within 12 months, the certification body shall withdraw the certificate. To resume the suspended certificate, the certificate holder shall make application to the certification body. The certification body shall carry out the factory inspection in accordance with the requirements for initial factory inspection. If necessary, samples will be taken randomly for test. Suspended certificates will be resumed after the factory inspection and test (if applicable) are passed.

If follow-up inspection fails, certification body will decide to suspend or withdraw the relevant certificates depending on the non-conformities.

For suspended certificates, certificate holders shall apply for resuming certificates and accept the factory inspection one month after the certificate suspension, but not exceeding 3 months. Otherwise, the certification body shall withdraw the suspended certificates.

The certification body shall carry out the factory inspection in accordance with the requirements for initial factory inspection. If the factory inspection is passed, the suspended certificate will be resumed; otherwise, the certificate will be withdrawn.

Information of certificates being suspended, cancelled or withdrawn shall be announced by certification bodies in appropriate ways.

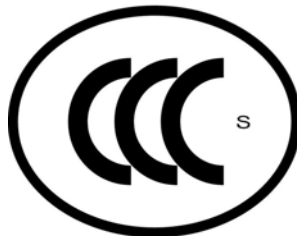
6. Use of Compulsory Product Certification Mark

6.1 General requirement

The certificate holder shall follow *Administrative Measures for Compulsory Product Certification Mark*.

6.2 Design of the mark

The certification mark with “S” (as below) shall be used for certification concerning safety only:



The certification mark with “S&E” (as below) shall be used for certification concerning both safety and EMC:



6.3 Use of derived certification mark

The products listed in this document shall not use any derived certification mark.

6.4 Ways of application

Any of the following three ways may be used:

- 1) affixing standard marks printed only by CNCA,
- 2) printing on the nameplate, or
- 3) molding.

6.5 Location of the mark

The certification mark shall be applied on an exposed location on the outer body of the product.

The certification marks shall be applied separately on the main part(s) and split part(s) of split-type air-conditioners and similar appliances.

7. Fee

The certification fee shall be charged by the certification body and the testing body according to the relevant national requirements.

Appendix 1

Principles of Defining Application Unit

Product name	Principles of defining application unit
Household refrigerators, food freezers and ice-makers	<ol style="list-style-type: none"> 1.The application unit shall be defined according to type (refrigeration mode), structure and the rated input power of the compressor. 2.The critical components having effects on EMC of the products shall be the same.
Electric fans	<ol style="list-style-type: none"> 1.The application unit shall be defined according to type, structure and specifications (dimensions, power). 2.The critical components having effects on EMC of the products shall be the same.
Heat pumps, air-conditioners and dehumidifiers	<ol style="list-style-type: none"> 1. The application unit shall be defined according to type and specifications. 2. The critical components having effects on EMC of the products shall be the same.
Motor-compressors	<ol style="list-style-type: none"> 1.The application unit shall be defined according to type structure and specifications. 2.The critical components having effects on EMC of the products shall be the same.
House washing machines/Spin extractors	<ol style="list-style-type: none"> 1. The application unit shall be defined according to type structure and specifications. 2. The critical components having effects on EMC of the products shall be the same.
Storage water heaters	The application unit shall be defined according to type, structure and specifications (power range).
Room Heaters	The application unit shall be defined according to type, structure and specifications (power range).
Vacuum cleaners	<ol style="list-style-type: none"> 1. The application unit shall be defined according to type, structure and specifications. 2. The critical components having effects on EMC of the products shall be the same
Appliances for skin and hair care	<ol style="list-style-type: none"> 1.The application unit shall be defined according to type, structure and motor. 2. The critical components having effects on EMC of the products shall be the same.
Instantaneous water heaters	The application unit shall be defined according to type structure and specifications (power range).
Electric irons	<ol style="list-style-type: none"> 1. The application unit shall be defined according to type, structure and specifications (power range). 2. The critical components having effects on EMC of the

	products shall be the same.
Electromagnetic Ovens	The application unit shall be defined according to type, structure and specifications (power range).
Roasters ,Grills and Toasters	The application unit shall be defined according to type, structure and specifications (power range).
Kitchen Machines	The application unit shall be defined according to type, structure and specifications.
Microwave ovens	The application unit shall be defined according to type, structure and specifications (power range).
Appliances for heating liquids	The application unit shall be defined according to type, structure and specifications (power range).
Cooking ranges, hobs and ovens	The application unit shall be defined according to type, structures and specifications (power range). The cooking ranges, hobs and ovens shall be in different application units.
Range hoods	The application unit shall be defined according to type and structure.
Electric rice cookers	1. The application unit shall be defined according to type, structure and specifications (power range). 2. The critical components having effects on EMC of the products shall be the same.
Water dispenser	The application unit shall be defined according to type, structure and specifications.

Appendix 2

Household and Similar Use Appliances

Standards and Scope

Product scope	Standards for certification
Household refrigerators, food freezers and ice-makers: (with effective volume not exceed 500L); Applies to refrigerators for household and similar use with/without frozen compartment, frozen food storage cabinet, freezer and their combination	GB4706.1 GB4706.13 GB4343.1 GB17625.1
Electric fans: Applies to Electric fans with single-phase a.c or d.c for household and similar use e.g. ceiling fan, table fan, pedestal fan, ventilating fans, partition fan, wall fan, and their regulators	GB4706.1 GB4706.27 GB4343.1 GB17625.1
Heat pumps, air-conditioners and dehumidifiers Cooling(heating) capacity shall not exceed 21000 cal/h(24360W)	GB4706.1 GB4706.32 GB4343.1 GB17625.1
Motor-compressors (input power not exceed 5000W) Applies to sealed (hermetic and semi-hermetic type) motor-compressors for household and similar use	GB4706.1 GB4706.17
Household washing machines/ Spin extractors Applies to washing machines with/without water heating function, a spin extraction function and with a drying function	GB4706.1 GB4706.24 GB4706.20(if applicable) GB4706.26 GB4343.1 GB1765.1
Storage water heater Applies to storage water heaters intended for heating water to a temperature below its boiling point	GB4706.1 GB4706.12
Room Heater Applies to electric rooms heaters for household and similar purposes, e.g. radiation heaters, panel heaters, liquid-filled radiators, fan heaters, convactor heaters, tubular heaters	GB4706.1 GB4706.23
Vacuum cleaner Applies to vacuum cleaners and electric water suction cleaning appliances, driven by either series or D.C. motor	GB4706.1 GB4706.7 GB4343.1 GB17625.1
Appliances for skin and hair care Applies to appliances with electric heating components for skin and hair care of both human and animal	GB4706.1 GB4706.15 GB4343.1

	GB17625.1
Instantaneous water heater Applies to instantaneous storage water heaters intended for heating water to a temperature below its boiling point	GB4706.1 GB4706.11
Electric iron Applies to electric dry irons and steam irons for household and similar purpose	GB4706.1 GB4706.2 GB4343.1 GB17625.1
Electromagnetic Cookers Applies to electromagnetic heating kitchen appliance for household or similar purpose, which may contain electromagnetic heating components single hob or hobs	GB4706.1 GB4706.29(portable appliance) GB4706.22(stationary appliance)
Roasters: Including grills, toasters, waffle irons and similar appliances.	GB4706.1 GB4706.14
Kitchen Machines Applies to household food preparation machines and similar multiple-use food preparation machines, e.g. food mixers, cream whippers, egg beaters, blenders, sieving machines, churns, ice-cream machines including those for use in refrigerators and freezers, citrus fruit squeezers, centrifugal juicers, mincers, noodle makers, berry juice extractors, slicing machines, bean slicers, potato peelers, graters and shredders, knife sharpeners, can opens, knives, food processors, coffee mills not exceeding 500g hopper capacity, grain grinders not exceeding 3 liters hopper capacity.	GB4706.1 GB4706.30
Microwave ovens Applies to appliances for heating food and beverages using electromagnetic energy (microwaves) in one or more of the I.S.M. frequency bands over 300 MHz and intended for household use. These appliances may also incorporate a browning or steaming function.	GB4706.1 GB4706.21
Cooking ranges, hobs, ovens and similar appliances Applies to stationary electric cooking ranges, hobs, ovens and similar appliances for household use. Examples are stationary grills and griddles, pyrolytic self-cleaning ovens, induction hobs and steam ovens.	GB4706.1 GB4706.22
Range hoods	GB4706.1

Applies to electric range hoods intended for installing above household cooking ranges, hobs and similar cooking appliances, with fans, lights and controls.	GB4706.28
Appliances for heating liquids Applies to appliances for heating liquids for household and similar purposes, e.g. kettles, electric boiled pot, cooking pans, milk heaters, tea kettles, coffee-makers, steam cookers, water boilers, etc.	GB4706.1 GB4706.19
Electric rice cooker Applies to automatic heat-preservation electric rice cooker with timer.	GB4706.1 GB4706.19 GB4343.1 GB17625.1
Water dispenser Applies to water dispenser and similar appliances for heating and cooling beverage.	GB4706.1 GB4706.19 GB4706.13(if applicable)

Appendix 3

Sample Quantity Required for Type Test

Product Name	Quantities of typical type sample for test
Household refrigerators, food freezers and Ice-makers	1
Electric fans	2
Heat pumps, air-conditioner and dehumidifier	1
Motor-compressor	3 (including one locked-rotor sample and one open-lid sample)
Household washing machines/Spin extractors	1
Storage water heater	2
Room Heaters	2
Vacuum cleaners	2
Appliances for skin and hair care	2
Instantaneous water heater	2
Electric irons	2
Electromagnetic ovens	2
Toasters, grills and toasters	2
Kitchen machines	2
Microwave ovens	2
Cooking ranges, hobs, ovens	2
Range hoods	2
Appliances for heating liquids	2
Electric rice cookers	2

Note: If the test cannot be continued after the abnormal test, the applicant shall add samples.

Appendix 4

List of Critical Components in terms of Safety

Category	Product Name	Applicable standards	Quantity
Power supply connection	Supply cord assemblies	GB15934	12 sets
	Plugs	GB2099.1 GB1002	12 pcs
	Supply cord	GB5013 GB5023	50m
	Couplers (including connector)	GB17465.1~2	12sets
	Connectors	GB13140.1~3	10pcs
		GB13140.4	70pcs
		GB13140.5	
Flat quick-connecting devices	GB17196	24pcs	
Switches	Switches	GB15092	10pcs
	Starting relays	IEC 61810	10pcs
Controls	Temperature controls	GB14536.1 GB14536.10	10pcs
	Time controls	GB14536.1 GB14536.8	10pcs
	Electric controls	GB14536.1	10pcs
	Electric valves	GB14536.1 GB14536.9	10pcs
	Energy regulators	GB14536.1 GB14536.12	10pcs
	Starting relays for motors	GB14536.1 GB14536.11	10pcs
Luminaries	Screw lamp holders	GB17935	12pcs
	AC-supplied electronic ballasts for fluorescent lamps	GB19510.4	6pcs
	Ballasts for fluorescent lamps	GB19510.9	9pcs
	Starters for fluorescent lamps	GB20550	30pcs
	Bayonet lamp holders	GB17936	12pcs
	Tubular fluorescent lamps & starter holders	GB1312	10pcs
	Ballast for high-pressure vapour lamps	GB19510.10	17pcs
Capacitors	Capacitors	GB/T13667.1	46pcs

Protective device	Miniature fuse-links	GB9364.1~3	48pcs (cartridge fuse-links) , 66pcs(sup-mi niature fuse-links)
	Thermal fuse	GB9816	60pcs
	Compressor thermal protector	GB14536.1 GB14536.5	10pcs
	Motor thermal protector	GB14536.1 GB14536.3	10pcs
Windings	Motor	GB12350	2pcs
	Transformers	GB19212.5 GB19212.7 GB19212.18	7pcs

Note: samples of non-metallic materials required for components tested in appliance:
All non-metallic materials on appliance shall be resistant to heat, fire and tracking. Two/three non-metallic components or five material plates (125×13×2mm) are required together with appliance samples.

List of Important Components and Materials

No.	Name	Controlled items
1	Internal wire	Supplier, product name, model/type and technical data, wire material, cross-sectional area, insulating material
2	Terminal block	Supplier, product name, model/type and technical data, block(metal) material, cross-sectional area of the block, insulating material of block holder
3	Non-metallic materials	Supplier, product name(such as appliance shell, supporting live parts), material(such as ABS,PBT,PAPC and so on), brand num.(such as PC-6, PC-66 and so on), glow-wire class(such as HB40, HB75 and so on), stuff of various materials

Appendix 5

List of EMC Critical Components

Product Name	Components
Refrigerators	Compressor* Micro-computer control board (including inverter) or mechanical thermostat* Electro-magnetic valve, defrost timer, power filter
Air Conditioner	Compressor* Micro-computer control board (including inverter) or mechanical thermostat* Electro-magnetic valve, negative ion generator, power filter
Washing Machines	Micro-computer controls or programme controller* Timer, electric motor, power filter
Electric rice cooker	Thermostat or temperature limiter* Electronic controls, silicon controlled rectifier
Electric iron	Thermostat or temperature limiter* Electronic controls, silicon controlled rectifier
Electric fans(Electronic control fans and DC fans)	Electronic controls* DC motor
Appliance for Skin and hair care	Electronic controls* Motor Power filter
Vacuum cleaner	Electronic controls* Motor Power filter

Note: * indicates that the component has important effects on EMC performance.

Appendix 6

Factory Quality Assurance Ability Requirements for Compulsory Certification

Factory shall meet the requirements for factory quality assurance ability specified in this document, in order to ensure that all certified products are identical with the sample(s) against which the type test was approved.

1. Responsibilities and Resources

1.1 Responsibilities

Factory shall define the responsibilities and inter-relations of all the personnel involved in quality activities. And Factory shall appoint a management representative for quality, who, irrespective of other responsibilities, shall be responsible for:

- a) ensuring that quality system, which meets the requirements of this document, is established, implemented and maintained,
- b) ensuring that the products with the compulsory certification mark are produced in conformity with the standards to which they were certified,
- c) establishing documented procedures to ensure that compulsory certification marks are kept and used appropriately,
- d) establishing documented procedure to ensure that the compulsory certification mark is not affixed on any non-conforming product or changed product that was not notified to certification body.

The management representative for quality shall be competent to perform the work.

1.2 Resources

Factory shall be equipped with necessary production facility and testing equipment in order to consistently manufacture products in conformity with relevant standards. In addition, factory shall provide relevant human resources, to ensure that personnel performing work affecting product quality is competent, and shall establish and maintain necessary environment suitable for manufacturing, testing and inspection, storage, etc.

2. Documents and Records

2.1 Manufacturer shall establish and maintain documented quality plan or similar documents for certified products, and the documents necessary to ensure that processes related to product quality are operated and controlled effectively. Quality plan shall include requirements for product design objective, realization process, test and related resources, changes (i.e. standards, techniques, critical components, etc.) to certified products, as well as use and management of marks.

Standards or specifications that the design is based on, as one essential part of quality plan, shall be no less strict than the requirements of the standards in this document.

2.2 Factory shall establish and maintain documented procedures to control the documents

required in this document, to ensure that:

- a) all documents are approved by authorized personnel prior to issue and change;
- b) changes and current revision status of documents are identified to prevent unintended use of obsolete documents;
- c) relevant valid versions of applicable documents are available at points of use.

2.3 Factory shall establish and maintain documented procedures to define the controls for the identification, storage, protection and disposition of records. Records shall be legible, integral to provide evidence of product conformity to requirements.

Records shall be retained for an appropriate period.

2.4 Factories shall establish and maintain archives for certified products. The archive shall at least include the following documents: certificate(s), test report(s), initial/follow-up inspection report(s), approval documents for changes/extension of certified products, sampling test report(s) of follow-up inspection(original or copies).

3. Purchasing and Incoming Goods Inspection

3.1 Control of Supplier

Factory shall establish the procedures that define the criteria for selection, evaluation and routine supervision of supplier, which provide critical components and material, to ensure the supplier has ability to provide the critical components and material in accordance with requirements.

Records of the evaluations and routine supervision shall be maintained.

3.2 Inspection/Verification for Critical Components and Material

Factory shall establish and maintain procedures of inspection or verification for purchased critical components and material, and of periodic verification inspection, to ensure that critical components and material meet specified certification requirements.

Inspection for purchased critical components and material may be carried out by the factory or the supplier. Where inspection is performed by the supplier, the factory shall specify the intended inspection requirements to the supplier.

Factory shall maintain records of inspection or verification of critical components, verification inspection records, evidence of conformity and relevant inspection data, etc.

4. Process Control and Inspection

4.1 Factory shall identify critical production processes and arrange operators with appropriate qualification at the processes. If product quality can not be guaranteed due to lack of operating document, appropriate operating instructions shall be prepared to make production processes under control.

4.2 Where environment condition is required, factory shall meet the requirements.

4.3 Factory shall monitor and control appropriate process parameters and product

characteristics, as applicable.

4.4 Factory shall establish and keep maintenance procedure for the manufacturing equipment.

4.5 Production shall be inspected at appropriate stages of manufacturing to ensure that products, components and parts are identical to the sample approved for certification.

5. Routine Tests and Verification Tests

Factory shall establish and maintain documented routine test and verification test procedures to verify and demonstrate that products are in compliance with relevant requirements. The procedures shall include test items, contents, method, acceptance criteria, etc. Test records shall be maintained. Routine tests and verification tests shall meet the requirements specified in the relevant *Implementation Rules for Compulsory Certification*.

Routine tests are performed to all products on the production line and are normally carried out at the final stage of production. Normally no further operations may be carried out after these tests, except for labeling and packing.

Verification tests are tests on samples taken randomly in order to verify and demonstrate that products consistently meet standard requirements.

Routine Tests and Verification Tests shall be carried out according to the requirements specified in Appendix 7.

6. Inspection and Test Equipment

The equipment used for inspection and test must be regularly calibrated and checked for correct operation, and meet inspection and test capacity requirements.

Factory shall stipulate the operation rules of the inspection and test equipment. Testing personnel shall follow the rules and use the equipment correctly.

6.1 Calibration

Inspection and test equipment used for determining the conformity of the products being manufactured shall be calibrated on a regular basis. All calibrations undertaken on such equipment must be traceable to national or international standards. For in-house calibration, the method, acceptance criteria, calibration interval, etc. shall be documented. Calibration status of the equipment shall be easily identified by operator and personnel in-charge.

Calibration records shall be maintained appropriately.

6.2 Functional Check

The functional check of the equipment used for routine tests and verification tests shall be undertaken on a daily basis. When functional check is found to be not satisfying specified requirements, arrangements shall allow previous product to be traced, retrieved and re-tested if necessary. Operator shall be instructed on what action is to be taken if a functional test is found to be unsatisfactory.

The results of functional check and all subsequent corrective actions taken must be recorded.

7. Control of Non-conforming Product

Factory shall establish procedure of control of non-conforming product, which shall include identification method, segregation, disposal, corrective action and preventive action. Repaired and reworked product shall be re-tested. Records of repairing for critical components and parts and disposal of non-conforming product shall be maintained.

8. Internal Audit

Internal audit procedures shall be established and documented to ensure that quality system is implemented effectively and certified products are consistent. The results of internal audit shall be maintained.

Factory shall keep records of all complaints, especially to a product's non-compliance with requirements of relevant standard, and make these complaints as one of inputs of internal audit.

Corrective and preventive actions shall be taken to non-conformities, and records shall be maintained.

9. Consistency of Certified Product

Factory shall control the consistency of all certified products with the sample(s) against which the type test was approved, in order to ensure all certified products are compliant with requirements continuously.

Factory shall establish procedures to monitor changes of the critical component, material, construction and factors that may affect compliance with relevant requirements. The changes on certified products must be notified to the certification body for approval, prior to their implementation.

10. Packing, Handling and Storage

Finished products shall be packaged, stored and handled in such a way as to ensure that they will continue to comply with the applicable standards.

Appendix 7

Test Requirements in Factory Quality Control for Compulsory Certification of Household and Similar Use Appliances

Note:

1. Routine tests are performed to all products on the production line and are normally carried out at the final stage of manufacture. Normally no further operations, except for labeling and packing, may be carried out after these tests. Verification tests are taken randomly in order to verify and demonstrate that products consistently meet standard requirements. Verification tests shall be in accordance with the requirements of the standards.
2. Fast test methods that are identified as equivalent to those specified in the standards may be used for routine tests.
3. Verification tests can be carried out by the test laboratory if the factory has no test equipments.

Product name	Standards for certification	Test items	Verification tests (Num. of standard items)	Routine tests (Num. of standard items)
Household refrigerator Food freezer Ice-makers	GB4706.1 GB4706.13 GB4343.1 GB17652.1	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§16)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	
		Protection against access to live parts	once/half a year (§8)	
		Heating	once/half a year (§11)	
		Moisture resistance	once/half a year (§15.101, 15.102)	
		EMC	Regular	
Electric fan	GB4706.1 GB4706.27 GB4343.1	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)

	GB17652.1	Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input	once/half a year (§10)	√ (Method 4 in annex)
		Marking	once/half a year (§7.1)	
		Heating	once/half a year (§11)	
		Abnormal operation	once/half a year (§19.6)	
		Mechanical hazards	once/half a year (§20.2)	
		EMC	Regular	

Product Name	Standards for Certification	Test items	Verification tests (Num. of Standard Items)	Routine tests (Num. of Standard Items)
Heat pumps Air-conditioner Dehumidifiers	GB4706.1 GB4706.32 GB4343.1 GB17652.1	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§16.4)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 5 in annex)
		Power input and current	once/half a year (§10)	
		Marking	once/half a year (§7)	
		Heating	once/half a year (§11)	
		Moisture resistance	once/half a year (§15)	
		Abnormal operation	once/half a year (§19.5,19.8)	
		EMC	Regular	
Motor-compressors	GB4706.1 GB4706.17	Earthing Resistance	once/half a year (§ 27.5)	
		Electric Strength	once/half a year (§16.4)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	
		Power input and current	once/half a year (§10)	
		Mechanical strength-hydraulic pressure test	once/half a year (§21.101)	

	Earthing Resistance only applicable to compressors intended for direct connection of the appliance supply cord to the motor-compressor terminals.			
Storage heaters water	GB4706.1 GB4706.12	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	
		Marking	once/half a year (§7)	
		Construction	once/half a year (§22.101)	√ (Method 7 in annex)

Product Name	Standards for Certification	Test items	Verification tests (Num. of Standard Items)	Routine tests (Num. of Standard Items)
Washing machines/Spin extractors	GB4706.1 GB4706.24 GB4706.26 GB4343.1 GB17652.1 GB4706.20 (If applicable)	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	
		Marking	once/half a year (§7)	
		Protection against access to live parts	once/half a year (§8)	
		Electric Strength after appliances subject to spillage, spray	once/half a year (§15.3)	
		Stability and mechanical hazards- door interlock	once/half a year (§20)	√ (Method 6 in annex)
		Stability and mechanical hazards –braking test		
		EMC	Regular	
Vacuum cleaners	GB4706.1 GB4706.7 GB4343.1 GB17652.1	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)

		Power input	once/half a year (§10)	√ (Method 9 in annex)
		Marking	once/half a year (§7)	
		Heating	once/half a year (§11)	
		Abnormal operation	once/half a year (§19.10)	
		EMC	Regular	

Product Name	Standards for Certification	Test items	Verification tests (Num. of Standard Items)	Routine tests (Num. of Standard Items)
Room heaters	GB4706.1 GB4706.23	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	
		Marking	once/half a year (§7)	
		Construction	once/half a year (§22.8)	√ (Method 8 in annex)
Appliances for skin and hair care	GB4706.1 GB4706.15 GB4343.1 GB17652.1	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	
		Marking	once/half a year (§7)	
		EMC	Regular	
	Appliances are subjected to the test of earthing resistance, as applicable.			
Instantaneous water heaters	GB4706.1 GB4706.11	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	

		Marking	once/half a year (\$7)	
		Construction	once/half a year (\$22.28)	√ (Method 7 in annex)
		Abnormal operation	once/half a year (\$19.2)	

Product name	Standards for certification	Test items	Verification tests (Num. of standard items)	Routine tests (Num. of standard items)
Electric irons	GB4706.1 GB4706.2 GB4343.1 GB17652.1	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	
		Marking	once/half a year (§7)	
		Abnormal operation	once/half a year (§19.4)	
		EMC	Regular	
Electromagnetic ovens	GB4706.1 GB4706.29 (Portable appliance) GB4706.22 (stationary appliance)	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	
		Marking	once/half a year (§7)	
		Abnormal Operation	once/half a year (§19)	
Roasters Grills Toasters	GB4706.1 GB4706.14	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√*(4) (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	

		Marking	once/half a year (\$7)	
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Product name	Standards for certification	Test items	Verification tests (Num. of standard items)	Routine tests (Num. of standard items)
Kitchen machines	GB4706.1 GB4706.30	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength		√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	
		Marking	once/half a year (§7)	
		Heating	once/half a year (§2.2.30,11)	
		Electric Strength after appliances subject to Spillage	once/half a year (§15.3)	
Microwave ovens	GB4706.1 GB4706.21	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§16.4,16.101,16.102)	√ (Method 10 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	
		Marking	once/half a year (§7)	√ (Method 10 in annex)
		Microwave leakage		√ (Method 10 in annex)
		Construction	once/half a year (§20.104)	√ (Method 10 in annex)
		Abnormal Operation	once/half a year (§19.101)	



Product name	Standards for certification	Test items	Verification tests (Num. of standard items)	Routine tests (Num. of standard items)
Cooking ranges, hobs, ovens	GB4706.1 GB4706.22	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	
		Marking	once/half a year (§7)	
Range hoods	GB4706.1 GB4706.28	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input	once/half a year (§10)	√ (Method 11 in annex)
		Marking	once/half a year (§7.1)	
		Heating	once/half a year (§11)	
		Abnormal Operation	once/half a year (§19.6)	
Appliances for heating liquids	GB4706.1 GB4706.19	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	

		Marking	once/half a year (§7.1)	
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Product name	Standards for certification	Test items	Verification tests (Num. of standard items)	Routine tests (Num. of standard items)
Electric cookers rice	GB4706.1 GB4706.19 GB4343.1 GB17625.1	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	
		Marking	once/half a year (§7)	
		Abnormal Operation	once/half a year (§19.4)	
		EMC	Regular	
Water dispensers	GB4706.1 GB4706.19 GB4706.13 (If applicable)	Earthing Resistance	once/half a year (§ 27.5)	√ (Method 1 in annex)
		Electric Strength	once/half a year (§13.3)	√ (Method 2 in annex)
		Leakage Current	once/half a year (§13.2)	√ (Method 3 in annex)
		Power input and current	once/half a year (§10)	
		Marking	once/half a year (§7)	
		Abnormal Operation	once/half a year (§19.4)	

Annex: Test Methods for Routine Test (recommended)

Method 1: Earthing Resistance

For class I appliances, a current at least 10A, derived from a source having a no-load voltage not exceeding 12V a.c is passed between the accessible earthed metal part and earthing terminal (for class 0I and class I appliances intended to be permanently connected to fixed wiring) or the earthing pin or earthing contact of the plug or the earthing pin of the appliance inlet (for other appliances). The voltage drop is measured and the resistance is calculated according to the current and the voltage drop.

Earthing resistance is not exceed:

--for appliances having a supply cord, 0.2Ω , or 0.1Ω plus the resistance of the supply cord

--for other appliances, 0.1Ω

note:

1. Test place will be decided by the manufacture according to the production technology.
2. Care is to be taken to ensure that the contact resistance between the tip of the measuring probe and the metal part under test does not influence the test results.

Method 2: Electric Strength

The insulation of the appliance is subjected to a voltage of substantially sinusoidal waveform having a frequency of 50 Hz or 60 Hz for 1 min. The values of the test voltage for different types of insulation are given in the following table.

Points of application	Test voltage (V)		
	class 0、0 I、I、II		class III
	Rated voltage		
$\leq 150V$	$> 150V$		
Between live parts and accessible metal parts separated from live parts by: -basic insulation only -double or reinforced insulation* (1) (2)	800 2000	1000 2500	400 —
* (1) This test is not applicable for class O appliances. (2) For class 0I appliances and class I appliances, this test need not be carried out on parts of class II construction if the test is considered to be inappropriate.			

Notes:

- (1) It may be necessary for the appliance to be in operation during the test to ensure that the test voltage is applied to all relevant insulation, for example, heating elements controlled by a relay.
- (2) The circuit used for the test incorporates a current sensing device that trips when the current exceeds the limit. When exceed, alarms by sound or light (Breakdown is assumed to occur when the current in the test circuit exceeds 5 mA. However, this limit may be increased up to 30mA for appliances with a high leakage current).The high voltage transformer is to be capable of maintaining the specified voltage at the limiting current.
- (3) Instead of being subjected to an a.c. voltage, the insulation may be subjected to a d.c. voltage of 1,5 times the value shown in the table. An a.c. voltage having a frequency up to 5 Hz is considered to be a d.c. voltage.

Method 3: Leakage Current

The leakage current can be measured as the following method if the manufacturer considers it is necessary according to the characteristics of the products.

The leakage current is measured between any pole of the supply and accessible metal parts.

Motor-operated appliances and combined appliances are supplied at 1.06 times rated voltage.

Heating appliances are operated at 1.15 times the rated power input.

Three-phase appliances which, according to the instructions for installation, are also suitable for single-phase supply are tested as single-phase appliances with the three circuits connected in parallel.

The leakage current shall not exceed the following values:

- for class 0、 class 0 I and class III appliances.....0.5mA
- for portable class I appliances.....0.75mA
- for stationary class I motor-operated appliances..... 3.5mA
- for stationary class I heating appliances.....0.75mA or 0.75mA per Kw
rated power input of the
appliance with a maximum
of 5 mA, whichever is
higher
- for class II appliances.....0.25mA

For combined appliances, the total leakage current may be within the limits specified for heating appliances or motor-operated appliances, whichever is the greater, but the two limits are not added.

Notes:

- (1) It is recommended that the appliance is supplied through an isolating transformer; otherwise it is to be insulated from earth.
- (2) The appliance is operated for a duration decided by the manufacturer according to the characteristics of the product.

Method 4: supplementary items for routine test on electric fan

Method of measuring power input:

- Measuring total power input at rated voltage, under maximum load or conditions regulated by the appliance manufacturer.

Method 5: supplementary items for routine test on air conditioner

Method of measuring leakage current:

- Method is decided by the manufacturing technology for split- air conditioners.

Method 6: supplementary items for routine test on household washing machine

Lid or door interlock test for spin extractors:

- Drying machine of the drum type is supplied at rated load, rated voltage or maximum voltage while having a voltage range, shall incorporate an interlock that de-energizes the motor before the door opening exceeds 75mm. The motor shall not be possible to start when re-starting the machine with the door opening at 75mm.

Braking test for washing machine, spin extractors:

- Washing machines of the drum type that are loaded from the top or front, shall incorporate an interlock that de-energizes the motor before the door opening exceeds 50mm.
- Automatic washing machine of the agitator type and extractors that are loaded from the top shall incorporate an interlock that de-energizes the motor before the door opening exceeds 75mm.
- Spin extractors or washing machines of the drum type loaded from front, in which water extraction takes place in the drum for washing, shall incorporate an interlock that re-energizes the motor before lid or door opening exceeds 12mm.
- The appliance is supplied at rated load in which water extraction takes place. If the lid or door opens, the drum speed shall be no higher than 60 r/min within 7s of opening the lid or door by 50mm.

Method 7: supplementary items for routine test on storage water heater and

instantaneous water heater

Construction:

Compliance is checked by subjecting the appliance to water, air or other gas pressure of:

- 0.7MPa (for closed water heaters);
- 1.1 times rated pressure (for closed water heaters with rated pressure exceed 0.6 MPa) ;
- 0.3 MPa(for cistern-fed storage water heaters);
- 0.15 MPa(for open-outlet water heaters);
- 0.03 MPa (for cistern-type storage water heaters).

Note: checked on the container separately.

Method 8: supplementary items for routine test on liquid-filled room heater

Construction:

Heaters containing liquid shall be constructed so that they withstand the pressure test using water, air or other gas. The pressure is:

---For liquid-filled heater, the pressure is 0.2MPa;

---For other liquid-filled with working pressure exceeding 0.2MPa, the pressure is 1.1 times working pressure.

Method 9: supplementary items for routine test on vacuum cleaner

Method of measuring power input:

Measuring power input at rated voltage with nozzle being open. Test time is 5 seconds.

Method 10: supplementary items for routine test on microwave ovens

1 Marking and instructions:

- Appliances shall be marked with the warning regulated in the GB standards.

2 Construction:

- Check the operation of the door interlock by opening and closing the door.

3 Microwave leakage

- Microwave leakage is measured at rated voltage, appropriate load and operated with the microwave power control at the maximum setting. The instrument antenna is moved over the external surface of the appliance to locate the maximum microwave leakage, particular attention being given to the door and its seals. Microwave leakage at any point 50 mm or more from the external surface of the appliance shall not exceed 50W/m^2 .

4 Electric Strength

- Operating current of the current sensing device can be increased up to 100 mA.

Method 11: supplementary items for routine test on range hoods

Method of measuring power input: Measuring total power input at rated voltage, under maximum load or conditions regulated by the appliance manufacturer.